



**“The Composer”:
How Hybrid Productions Will Create a New Job Title in Theatre**

By Andy Head and Gary Jacobs

Introduction

A student stage manager sits at a console with two large monitors and a very high-powered computer. She adjusts her camera to make sure she can be seen clearly. Twenty-one actors are spread throughout rooms of the same building on a college campus, each one ready to go in their own custom-made station. An audience of viewers open emails, click links, and scroll through the digital program while waiting from bedrooms and couches. Though physically separated, all are connected by wires, screens, and signals. On their shared Zoom™ call, the stage manager waves to her camera and uses American Sign Language to cue the cast of Deaf and hearing performers. “*Ready? Three, two, one: go!*” The stream is now live. The play begins.

This essay introduces and examines the role of the Composer as an integral member of the design team for an online production of *She Kills Monsters: Virtual Realms* at the Rochester Institute of Technology and National Technical Institute for the Deaf. Prior to the early spring of 2020, the realm of online theatre was on the far fringes of theatrical production. The National Theatre in London had begun broadcasting live productions for remote audiences as part of their “NT Live” series as early as 2009—what they called filmed live theatre. However, this style of

theatre was far from the mainstream. Except in rare cases such as that, it was almost inconceivable for theatre to exist in a form that was either not live, not in-person, or both.

Then, as a worldwide pandemic spread from country to country, theatre companies of all kinds found themselves scrambling amid cancellations, postponements, and shutdowns. Signaling the beginning of a massive shift, Broadway went dark on March 12, 2020 for a self-imposed thirty-two days, a period that is almost unbelievable in hindsight. COVID-19 forced an urgent and fundamental revolution in theatrical performance. The Great Pivot¹ from live venues to online settings brought with it a survivalist mentality to *just get through this* as many theatres struggled to think beyond their traditional stages. How could theatre exist in a world where people avoided congregating? Was this shuttering of life a signal of the impending death of theatre itself? A necessary trend emerged: attempting to reach our conventional audiences via digital—and oftentimes unfamiliar—means. Out of a sheer desire to keep creating, and despite the swirling struggles of a new performance mode, theatre makers embraced the unknown. In fact, as performance scholar Fintan Walsh posits, “Mediatized theatre during the pandemic has not heralded the death of theatre but in many instances tried to keep it alive via rapid and radical adaptation.”²

The Director’s Perspective: Andy

At RIT/NTID it took time to reposition the performing arts department for this new kind of theatre. My first directing assignment amid the pandemic was set for April 2021. However, by the fall of 2020, I had already scrapped my original idea in search of a play that suited the digital landscape and didn’t fight against the medium. I was already familiar with Qui Nguyen’s wildly

¹ By this we mean the swift move to online modalities that took place across many areas of life at the start of the COVID-19 pandemic.

² Fintan Walsh, “Grief Machines: Transhumanist Theatre, Digital Performance, Pandemic Time” Theatre Journal, Volume 73, No. 3. Johns Hopkins University Press, September 2021.

popular play *She Kills Monsters*. The story centers on Agnes, a very average high school senior on the varsity cheerleading squad. A year after the tragic and unexpected death of her younger sister, Tilly, Agnes finds a homemade Dungeons and Dragons™ campaign among Tilly’s things. Desperate to learn more about the sister she’d previously all-but-ignored, Agnes seeks the assistance of Chuck, Tilly’s old Dungeon Master, and dives headfirst into the world of fantasy role play.³

Not long after the start of the pandemic, Nguyen, with prophetic vision, retooled his script specifically for online performance and rebranded it as *She Kills Monsters: Virtual Realms*. Many scenes now occurred via video calls. The play’s updated virtual focus checked my biggest box, but the script includes other important features such as strong female characters in leading roles and queer-identifying characters. As a bonus, its focus on D&D™ could be appreciated by RIT’s self-identified geek student population. Due to its over-popularity, *She Kills Monsters* felt like the easy choice. However, in the midst of a global pandemic, a massive turn to a new kind of performance, and a production concept that integrated Deaf and hearing actors together in one cast, our team needed an easy choice.

My preparation for directing the play was similar to what Mike Poblete charts in his article “Building an Engaging Zoom™ World.”⁴ As dramaturg for a *Love’s Labour’s Lost* production with the Hawai’i Shakespeare Festival (HSF), Poblete surveyed how various performances first utilized Zoom™ and what he gathered as the platform’s strengths and weaknesses. Naturally, these viewings guided how HSF wanted to tackle their own production. A July 2020 *New York Times* article highlighting its virtual adaptation called *She Kills Monsters*

³ Qui Nguyen, *She Kills Monsters: Virtual Realms*. New York, NY: Samuel French, 2020.

⁴ Mike Poblete, “Building and Engaging Zoom™ World: Lessons from Dramatizing a Digital *Love’s Labour’s Lost*” *Theatre Topics*, Volume 31, No. 2. Johns Hopkins University Press, July 2021.

“one of America’s most popular plays” with 797 productions performed (or planned) from 2013-2021.⁵ Per the Educational Theatre Association’s annual survey, in 2020 *She Kills Monsters* was #7 on the list of Top 10 High School Plays and Musicals. By 2021, it had moved up to #5.⁶ This meant there was no shortage of online performances for me to survey.

Due to RIT’s COVID-19 safety protocols requiring students to be physically distanced on campus, the production was planned to be performed using a video conferencing platform—likely Zoom™. This played to the strength of Nguyen’s adapted script. However, after watching multiple online productions of *Virtual Realms*, I knew that I did not want our production to look like it was on Zoom™. Even by the end of 2020, the appetite of some theatre makers (and audiences) was already waning for “Zoom™ theatre.”

Underneath the challenges inherent to being physically distanced and performing over Zoom™ was my intense desire that the play be performed live. Jared Mezzocchi’s article from early 2021, “The Technological Theatre Experimenters,”⁷ lays out his approach for co-directing *Russian Troll Farm*, which performed live online in the fall of 2020. In the article, Mezzocchi reflects on the importance of experimentation and a sense of play when creating a production online, both of which, coincidentally, also seem to be crucial ingredients for Walsh’s rapid and radical adaptation. Mezzocchi encourages all theatre makers to face the fear and uncertainty of digital theatre and “recommit ourselves to the essence of what makes theatre truly remarkable,” its liveness. Whereas Mezzocchi approaches real-time performance from the creator’s

⁵ Elizabeth Vincentelli, “Queer Kids, Nerds and Sword Fights: It’s the Hot School Play” *The New York Times*, July 2, 2020.

⁶ As stated on their website, EdTA is “an international nonprofit organization that serves as the professional association for theatre educators.” Annually, EdTA conducts a survey of the most frequently produced theatre productions in middle and high schools across America.

⁷ Jared Mezzocchi. “The Technological Theatre Experimenters.” *Howlround Theatre Commons*, February 19, 2021. <https://howlround.com/technological-theatre-experimenters>

perspective, I found myself more influenced by the audience's experience. As an audience member surveying other *Virtual Realms* productions, I found that recorded performances lost my attention early on and led to quicker disengagement with the play. On the other hand, simply knowing the actors were performing live while I was watching, even from miles away, brought me more firmly into the story. Despite technical glitches and unanticipated snafus, those performances were more immediate, more impactful, and cemented for me that our production had to be live. Though I had not read Mezzocchi's article as I was preparing to direct *She Kills Monsters*, his thoughts echo my own and reaffirm the choices made by our production team. Liveness and togetherness are at the heart of theatrical performance, and from the beginning we decided that if our audiences couldn't be with us physically then we had to preserve a shared, synchronous experience with them.

Having decided upon these two core objectives gave our production a direction. At the same time, in this digital venue my abilities were stymied by the uncertainty noted by Mezzocchi, and I felt stuck with how to actually move us forward. Enter, our Composer.

The Composer's Perspective: Gary

My role on the production team began as a technical advisor. Having a background in stage design means I understand how traditional productions are blocked and presented. However, my migration over the years into digital artforms, such as animation and video games, allowed me to offer new skills to this production's unique combination of live performance for online delivery. We struggled to label this style of theatre and finally landed on the term *hybrid theatre*, because our production fell somewhere between the stage and the web. Actors would be performing live, in real-time, from various makeshift stages, and our audience would be viewing that performance remotely through their various screens. It was a mixing of mediums, similar to

a hybrid college course that includes some face-to-face instruction combined with some web-based learning. After all, the word *hybrid* itself means something made by combining two different things. We acknowledge that “hybrid theatre” is far from the standard term used to describe this kind of performance. Where we use *hybrid*, others may replace with *broadcast*, *online*, *digital*, *virtual*, and/or *mediatized* when referring to performances that undergo a process of transitioning from a live stage to an audience member’s computer screen.

During the production process, we discovered that the skill set I provided is a unique blending of traditional theatre experience with a new-media mindset. I did not easily fit into any of the traditional roles on a production team, such as scenic or projection designer, and we even debated with how to list me in the program. Ultimately, we arrived at “Compositor” in reference to my two primary areas of responsibility.

First, because the show would be performing to off-site patrons, I was tasked with finding the most optimal video conferencing software. Andy’s decision to break away from the standard Zoom™ grid, with actors in their respective boxes, would mean capturing individual video feeds from each actor and then rearranging them over one another. During initial testing we encountered several issues. When using the performer’s own laptops, it was immediately apparent that better computers would be required. The laptops that many students use daily have smaller screens, slower processors, and lower resolution cameras. This meant that any method relying on a performer’s laptop to process the video streams and separate the actor from their background before sending it to a server wasn’t going to be viable.

Additionally, our shared video conference would include close to 30 participants with the full cast, the stage managers, and the American Sign Language interpreters. With ASL used throughout the show, it was imperative for visibility to be clear. This required larger monitors so

actors could see all participants at once, even after hiding non-visible participants. Later blocking rehearsals revealed that many actors should be seen from the waist up, which positioned them at even greater distances from their screens and cameras and reinforced the need for the large monitors. Despite weekly production meetings and plenty of planning, discoveries throughout rehearsals made for continual modification to our plan and required significant energy spent on my first area of focus.

Rehearsal and Design Process: Andy

Admittedly, I was asking a lot of Gary. The issue of the video conferencing platform needed to be solved first because that answered many other questions about the production. From a performance standpoint, I had four wishlist items for the platform:

- 1) The actors should be able to see each other, the stage managers, and the interpreters throughout the entire call.
- 2) The actors should be hidden from the audience until we wanted them to be seen, but without having to turn their videos off and on.
- 3) The actors' videos should have the ability to be positioned and sized by us.
- 4) Each actor's background should be capable of displaying multiple location changes, again, without the actors having to do it themselves.

While Gary set to work, I started rehearsals with the actors. To maximize their live interaction, we rehearsed on Zoom™ *while in-person* with the actors masked at tables across the stage. Their physical blocking was kept relatively simple. The use of ASL necessitated that all actors could see their screens at all times and effectively eliminated the Brady Bunch blocking of acting to a person who you can't actually see on your screenleft or screenright. Actors only faced forward. Each actor was limited side-to-side by the left and right edges of their camera.

Likewise, the placement of their green screens and laptops restricted backward and forward movement. Perhaps the largest obstacle: the actors couldn't see how this all came together on the audience's end. Christina Gutierrez-Dennehy relates to this challenge in her own first Zoom™ directing experience, "The director (and stage manager) become the ultimate authorities on what "looks right," as Zoom™ removes any frame of reference that an actor might have. Of course, this practice requires a great deal of trust in a director."⁸ Such simplified physical blocking, combined with the original goal of distancing us from Zoom™, spurred us to elevate our "digital blocking".

In between rehearsals, the projection designer and I mapped out each of the 21 scenes into French scenes—which we called *frames*. The frames were designed like comic book pages with overlapping panels. Each frame allowed us to digitally block characters by adding or subtracting panels upon every entrance and exit. This created a continual cycle of screen reconfiguration with some frames consisting of only one character to those with 9+ characters—all of which would be happening live during the performance.

The frame designs allowed us to juxtapose character and panel positions depending on the needs of each scene. As the script specifies, scenes set in reality were designed like a standard video call. Fantasy scenes set within the Dungeons & Dragons™ campaign were more dynamic to highlight the location and tonal shift. Throughout the play, scenes alternate between these two worlds. When finally finished, the 158 uniquely-designed frames were then sent to Gary to begin stitching the characters, panels, and frames all together.

Relating back to Gutierrez-Dennehy, the frames also became a tool we used to strengthen the actors' frame of reference for performing online. Throughout initial tablework and into later

⁸ Christina Gutierrez-Dennehy, "Directing the Virus with 7 Towers Theatre Company's *Down from Heaven*" Theatre Topics, Volume 31, No. 2. Johns Hopkins University Press, July 2021.

blocking rehearsals, we often displayed images and gave detailed explanations of the evolving screen arrangements, background environments, and frame designs. Image 1, below, provides several examples of this process. Though unable to encapsulate the full real-time experience for audiences, these show-and-tell sessions aided actors in visualizing what the actual performance would look like and how their individual piece fit into the overall puzzle.

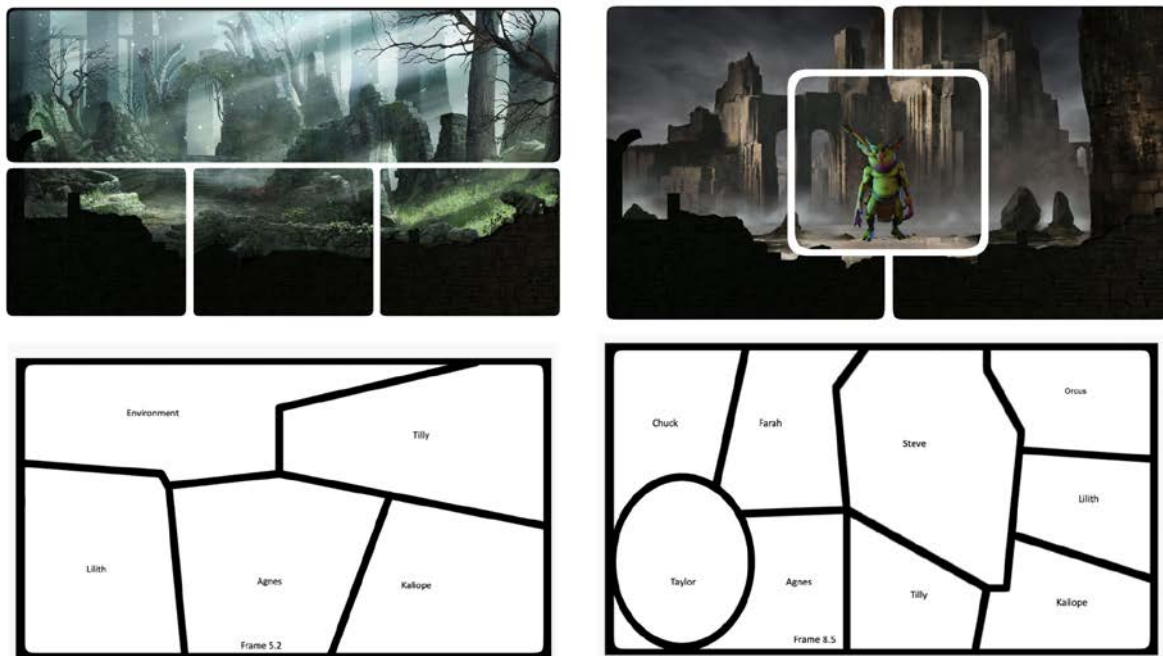


Image 1: Early drafts of the frame design process.

Compositing Process: Gary

My second area of focus was the process of digitally separating actors from their live, physical backgrounds and re-assembling them together in shared, digital environments. In film and animation, this is commonly referred to as “compositing”. However, in digital broadcasting and animation, the hardware and software used for compositing are either tuned for a live-controlled environment, such as a television weather report, or used with recorded material requiring a great deal of post-production work, such as a Marvel™ movie. Attempting to recreate

a stage production, remotely captured, and broadcast live, combines the challenges of both of these techniques.

High-end hardware and software, like NDI (Network Device Interface) protocol and SRT (Secure Reliable Transport) protocol systems, are available. These allow for capturing individual live feeds from cameras and transmitting them over the internet to a host computer with low latency. Unfortunately, these options are expensive and were mostly unavailable during 2020. Several free streaming options were promising, such as OBS Ninja™, but these placed heavy loads on each individual computer. As mentioned before, students' laptops were not capable of handling this work and resulted in delays of up to 20 seconds. Fortunately, video conferencing services, like Zoom™, process all streaming on their own servers, thus reducing the load on individual computers. Despite early tests with competitors, we ultimately ended up back on Zoom™.

In order to separate actors from their backgrounds cleanly for compositing, we needed to get the best resolution and color clarity possible. Early attempts tested Zoom's™ built-in virtual background features using a flat chroma key green image as the background to cut actors out. Unfortunately, the "AI" used to dynamically distinguish the participants from the background resulted in smeared edges and significant clipping. This method was not acceptable for a production utilizing American Sign Language.

Without a reliable digital option, we decided upon physical green screens for each performer. During technical rehearsals, lighting was regularly adjusted and cameras were replaced as needed to achieve the cleanest possible actor cutout. Each video feed was captured via Zoom™ and then pumped to the compositing computer. There, actors were separated from their green screens and placed onto a shared background in real-time, and *then* published live to

YouTube™. Proprietary solutions for this process are available, but we chose an open-source, freely available software called Open Broadcaster Software, or OBS™.



Image 2: Our student stage manager controls the show from the compositing computer.

Using OBS™ allowed us to capture the Zoom™ windows and isolate the performers from their backgrounds. Once captured, it was possible to crop, scale, position, rotate, and dynamically layer actor feeds to match the *frame* designs. When completed, frames were saved as individual “scenes”. The stage manager then advanced through scenes sequentially just as if they were lighting or sound cues.

This method did achieve all four items on Andy’s wishlist! Unfortunately, however, using Zoom™ in this way also created several problems: **1)** Each Zoom™ participant had lower camera quality. To combat this and achieve the highest quality Zoom™ source, we maximized the participant grid on a 4k external screen at the compositing computer and kept the number of visible participants to only 16—resulting in zero wasted screen space. **2)** Zoom™ repositions participants as they enter and exit meetings. We were forced to manually place each actor’s

video feed prior to each performance and match the capture grid in OBS™. All actors then left their Zoom™ feed open during the performance to prevent reshuffling.

Alongside these various technical challenges, aesthetic choices were coordinated. Each character was blocked to achieve balance in the composition of their frame, which helped establish a relationship from that character to the scene as a whole and also clearly framed each actor to better highlight their signing. Most importantly, characters needed to look natural in the context of the multi-layered environment and scene. This is where a unique amalgam of skills is required: a designer fluent in staging and production methods meets a digital effects artist familiar with the composition techniques of film, animation, and visual effects.

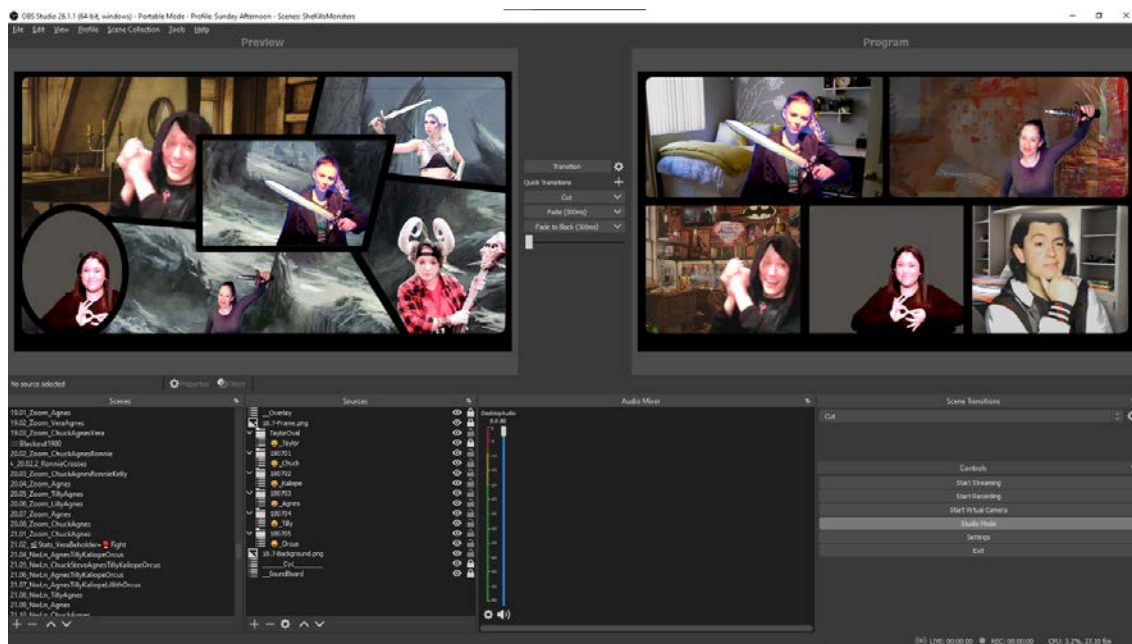


Image 3: Capturing individual video feeds via Open Broadcaster Software (OBS)™.

The Performance Itself

The Composer's work truly shined during the actual performances. This is when the much-tested software and high-speed hardware all came together with the physical green screens, the choreographed blocking, the specialized lighting, and the digital backgrounds to

create the cohesive, live experience our team desired. Much like a lighting or sound designer who completes their work during the rehearsal period and then hands off their design to be executed by a board operator, the Composer's work was planned to be executed by the stage manager working alongside a technician. Because this was an entirely new role and we were unsure of exactly what we needed from that board op, the task of execution ended up falling to Gary.



Image 4: Performer video feeds in a 4x4 grid as seen on Zoom™ (left) and via OBS™ (right)

As the Composer, he arrived before each performance to check the computers and input the various feeds into OBS™. Similar to an assistant stage manager checking props, we had to be sure everything was connected and running smoothly before we began. Actors were called to their computer stations as soon as they were in costume to check their cameras and monitor the color balance on every single video feed. Image 2, above, shows the stage manager's station during a performance with both the Zoom™ feed and the OBS™ screens operating in tandem. Image 3 displays the compositing computer running OBS™ with its many feeds listed in the bottom left window and the composited images of two consecutive scenes in the feed screens. In Image 4, various actors can be seen via Zoom™ in front of their physical backgrounds on the left, then cut out from those backgrounds on the right. Prior to showtime, the Composer had to manually plot where each feed “landed” in every composited scene throughout the play.

With all of this set, each live-streamed performance could flow cleanly from the characters' reality to the fantasy world of their Dungeons & Dragons™ campaign and back. The audience saw the play progress from solitary characters narrating to multiple characters sharing a Zoom™ call to D&D™ characters questing through New Landia. Image 5 illustrates one quest scene during performance. As Agnes and Tilly's group confronts Farrah the Faerie, the comic book-style framing helps tie together our various design choices with our specific digital techniques.



Image 5: Performance example during the run of the show.

One downside to this particular live-streaming approach is that the actors could not receive any of the audience response that is inherent to live theatre. Live streaming itself does not necessarily prevent live response; our audiences could send reactions via the YouTube™ comments section or live chat. However, the actors in their stations and the technicians “in the booth” could not experience those responses in real-time. Live feedback received from the audiences during previews is often used to fine-tune a performance. For our production, all of the

audience feedback came after each individual performance. In the end, and despite our best attempts, many surveyed audience members reported it was a clever and enjoyable experience but was also technologically disappointing. In the face of early tests, regular adjustments, and nightly double-checks, camera and mic quality issues were a constant hassle that hampered our final product.

In Closing

“Return to normal” is a well-known phrase. Yet, if there’s one lesson learned from COVID-19, it’s that the virus keeps changing and presenting new challenges. How much certainty do theatres have that there won’t be another variant or surge? Even if/when “normal” returns, we argue that theatre companies shouldn’t make a wholesale return to their old ways. Of course there should still be live theatre for live audiences! Additionally, certain space in theatre seasons should be purposefully saved for productions that are not traditional. That’s where the Compositor comes in. Exploring this direction and investing in this role prepares theatres to be more resilient in the face of the next disturbance. It can eliminate, or at least lessen, a future panic-filled scramble. Adaptation need not stop as life returns to normal. The fact is, having Gary on the team lessened the worries of producing a play for a remote audience. His skill set offered the team an array of design options that wouldn’t have been possible otherwise. Our production of *She Kills Monsters: Virtual Realms* was only one possible step in this still-new direction. The next step is encouraging more theatres to test out the idea of hybrid performance and finding more Compositors who can make that leap an achievable one. Ultimately, the goal of the Compositor is not to replace live theatre, but to allow future productions to be more successfully augmented with new technologies and shared with audiences beyond the physical theatre space. To return to the encouraging words of Jared Mezzocchi, “The theatre is a location in which

theatre can exist, but theatre has survived many permutations. It has traversed fields and taxi cabs and parades, has taken place in tents and on wagons...So why not on the internet?"

An actor stands before a green screen, surrounded by computer monitors and external cameras, signing in ASL the final words of the play. She is alone onscreen, set before a fantasy landscape reminiscent of Middle-earth and covered in golden light. The actor playing her unseen voicing counterpart watches from across the room and follows along carefully in spoken English. Dramatic and triumphant music swells. The stage manager monitors their Zoom™ connection and the OBS™ feed, ready for the next cue. Together the actors finish the final words, “Agnes grew up and she always remembered fondly the day she killed monsters.”⁹ The signing actor holds up the prop sword previously belonging to Tilly, reflects on her own journey, and then stabs it straight toward the camera lens. The music crescendos. The stage manager goes. A title card flashes: *The End*. The screen fades to black as the stream cuts out. The play ends.

⁹ Nguyen, *She Kills Monsters: Virtual Realms*, 72.

Bibliography

- Educational Theatre Association. "2020 Play Survey–Top 10 2019-2020 EdTA High School Play Survey." Accessed Oct, 2020. <https://community.schooltheatre.org/blogs/edta-news/2020/07/30/2020-play-survey>
- Gutierrez-Dennehy, Christina. "Directing the Virus with 7 Towers Theatre Company's *Down from Heaven*." *Theatre Topics* 31, No. 2 (July 2021): 161-167.
- Mezzocchi, Jared. "The Technological Theatre Experimenters." Howlround Theatre Commons, February 19, 2021. <https://howlround.com/technological-theatre-experimenters>
- Nguyen, Qui. *She Kills Monsters: Virtual Realms*. New York, NY: Samuel French, 2020.
- Poblete, Mike "Building and Engaging Zoom™ World: Lessons from Dramatizing a Digital Love's Labor's Lost." *Theatre Topics* 31, No. 2 (July 2021): 153-160.
- Vincentelli, Elizabeth. "Queer Kids, Nerds and Sword Fights: It's the Hot School Play" *The New York Times*, July 2, 2020.
<https://www.nytimes.com/2020/07/02/theater/she-kills-monsters-qui-nguyen.html>
- Walsh, Fintan. "Grief Machines: Transhumanist Theatre, Digital Performance, Pandemic Time." *Theatre Journal* 73, No. 3 (September 2021): 391-407.